

Colorado Department of Transportation
Structure Inspection and Inventory Report (English Units)

Highway Number (ON) 5D: 470A 1

Mile Post (ON)11: 25.532 mi

Bridge Key: F-17-HM

Inspection Date: 12/14/2011

Sufficiency Rating: 86.1 Not Eligible

Rgn/Sectn 2E/2M:	68	Hist Signif 37:	5	UW Inspection Date 93B:	
Trans Region 2T:	02	Posting status 41:	A	SI Date 93C:	
County Code 3:	035	Service on/un 42A/B:	6 1	Bridge Cost 94:	\$ 0
DOUGLAS		Main Mat/Desgn 43A/B:	6 2	Roadway Cost 95:	\$ 0
Place Code 4:	45955	Appr Mat/Desgn 44A/B:	0 0	Total Cost 96:	\$ 0
LONE TREE		Main Spans Unit 45:	2	Year of Cost Estimate 97:	
Rte.(On/Under)5A:	1	Approach Spans 46:	0	Brdr Brdg Code/% 98A/B:	
Signing Prefix 5B:	3	Horiz Clr 47:	59.3 ft	Border Bridge Number 99:	
Level of Service 5C:	1	Max Span 48:	85.0 ft	Defense Highway 100:	0
Directional Suffix 5E:	0	Str Length 49:	164.5 ft	Parallel Structure 101:	L
Feature Intersected 6:		Curb Wdth L/R 50A/B:	0.0 ft 0.0 ft	Direction of Traffic 102:	1
YOSEMITE STREET		Width Curb to Curb 51:	59.3 ft	Temporary Structure 103:	
Facility Carried 7:		Width Out to Out 52:	60.8 ft	Highway System 104:	1
SH 470 ML WBND		Deck Area:	9,988.9 sq. ft	Fed Lands Hiway 105:	0
Alias Str No.8A:		Min Clr Ovr Brdg 53:	99.99	Year Reconstructed 106:	1991
		Min Undrclr Ref 54A:	H	Deck Type 107:	1
Prll Str No. 8P		Min Undrclr 54B:	17.0 ft	Wearing Surface 108A:	6
F-17-HL		Min Lat Clmce Ref R 55A:	H	Membrane 108B:	2
Location 9:	328.05117409	Min Lat Undrclr R 55B:	10.5 ft	Deck Protection 108C:	1
.8 MI W OF JCT I 25		Min Lat Undrclr L 56:	5.49868766	Truck ADT 109:	5 %
Max Clr 10:	99.99	Deck 58:	7	Trk Net 110:	1
BaseHiway Net12:	1	Super 59:	8	Pier Protection 111:	#
IrsinvRout 13A:	000000470A	Sub 60:	8	NBIS Length 112:	Y
IrrsubRout No13B:	00	Channel/Protection 61:	N	Scour Critical 113:	N
Latitude 16:	39d 33' 31"	Culvert 62:	N	Scour Watch 113M:	0
Longitude 17:	104d 52' 53"	Oprrtg Rtg Method 63:	1 LF Load Fact	Future ADT 114:	80,560
Range18A:	66 W	Operating Rating 64:	58.0	Year of Future ADT 115:	2027
Township18B:	66	Inv Rtg Method 65:	1	CDOT Str Type 120A:	CPGC
Section18C:	3	Inventory Rating 66:	28.0	CDOT Constr Type 120B:	31
Detour Length 19:	0.6 mi	Asph/Fill Thick 66T:	003 "in"	Inspection Indic 122A:	
Toll Facility 20:	3	Str. Evaluation 67:	6	Inspection Trip 122AA:	
Custodian 21:	1	Deck Geometry 68:	7	Scheduling Status 122B:	
Owner 22:	1	Undrclr Vert/Hor 69:	6	Maintenance Patrol 123:	30
Functional Class 26:	12	Posting 70:	5	Expansion Dev/Type124:	C
Year Built 27:	1984	Waterway Adequacy 7:	N	Brdg Rail Type/Mod 125A/B:	R 0
Lanes on 28A:	3	Approach Alignment 72:	8	Posting Trucks 129A/B/C:	0 0 0
Lanes Under 28B:	8	Type of Work 75A:		Str Rating Date 130:	7/13/2001
ADT 29:	53,000	Work Done By 75B:		Special Equip 133:	-1
Year of ADT 30:	2007	Length of Improvment 76:	0.0 ft	Vert Clr N/E 134A/B/C:	X 99.99 0.00
Design Load 31:	6	Insp Team Indicator 90B:	RED TEAM	Vert Clr S/W 135A/B/C:	X 99.99 0.00
Apr Rdwy Width 32:	76.0 ft	Inspector Name 90C:	RUTHERFORDI	Vertical Clr Date:	12/1/2005
Median 33:	1	Frequency 91:	24 months	Weight Limit Color: 139:	0
Skew 34:	12.00 °	FC Frequency 92A:	-1	Str Billing Type:	U
Structure Flared 35:	1	UW Frequency 92B:	-1	Userkey 1 - System:	ONSY
Sfty Rail 36a/b/c/d:	1 0 1 1	SI Frequency 92C:	-1	Userkey 7-Update Indic:	
Rail ht36h:	34 "in"	FC Inspection Date 93A:			

Inspector Name: RUTHERFORDD

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Element Inspection Report

Elm/En	Description	Units	Total Qty	% in 1	CS 1	% in 2	CS 2	% in 3	CS 3	% in 4	CS 4	% in 5	CS 5
26/4	Conc Deck/Coatd Bars	(SF)	10,002	0 %	0	100 %	10,002	0 %	0	0 %	0	0 %	0
109/4	P/S Conc Open Girder	(LF)	1,141	100 %	1,140	0 %	1	0 %	0	0 %	0	0 %	0
210/4	R/Conc Pier Wall	(LF)	46	98 %	45	2 %	1	0 %	0	0 %	0	0 %	0
215/4	R/Conc Abutment	(LF)	132	98 %	130	1 %	1	1 %	1	0 %	0	0 %	0
234/4	R/Conc Cap	(LF)	64	100 %	64	0 %	0	0 %	0	0 %	0	0 %	0
301/4	Pourable Joint Seal	(LF)	132	100 %	132	0 %	0	0 %	0	0 %	0	0 %	0
302/4	Compressn Joint Seal	(LF)	132	77 %	102	15 %	20	8 %	10	0 %	0	0 %	0
321/4	R/Conc Approach Slab	(EA)	2	100 %	2	0 %	0	0 %	0	0 %	0	0 %	0
325/4	Slope Prot/Berms	(EA)	2	100 %	2	0 %	0	0 %	0	0 %	0	0 %	0
326/4	Bridge Wingwalls	(EA)	4	100 %	4	0 %	0	0 %	0	0 %	0	0 %	0
331/4	Conc Bridge Railing	(LF)	330	100 %	330	0 %	0	0 %	0	0 %	0	0 %	0
340/4	Superstr Cnc Coating	(EA)	1	100 %	1	0 %	0	0 %	0	0 %	0	0 %	0
341/4	Substr Conc Coating	(EA)	1	100 %	1	0 %	0	0 %	0	0 %	0	0 %	0
359/4	Soffit Smart Flag	(EA)	1	0 %	0	100 %	1	0 %	0	0 %	0	0 %	0

Elem/Env	Description	Element Notes
26/4	Conc Deck/Coatd Bars	3 Inches of asphalt over membrane. Some small potholes and impending potholes in #1 lane. Light to mod. trans., longit., and random cracking throughout (some open to 1/2 inch). Raveling along concrete rail at left edge, and along longit. seams in asphalt.
109/4	P/S Conc Open Girder	Some very light efflorescence seeping from hairline crack in top flange of Girder 1G, 10 feet from pier. Minor spall at end of Girder 1D. Minor spall in bottom flange of Girder 2A above right turn lane in NB direction.
210/4	R/Conc Pier Wall	Diagonal/vertical cracks (open to 1/16 inch) near center of wall on both sides. Some enlarged shrinkage cracks.
215/4	R/Conc Abutment	Spalling with exposed rebar, and with light vertical cracks, around utility blackout in Bay A at Abutment 3. (See 2005 photo) Hairline diagonal cracks at haunches of widened sections. Exposed rebar at Girder 2D at Abutment 3. Hairline vertical cracks in widened sections at Abutment 1. Girders are encased, and small pop-outs around Girders 2A and 2F.
234/4	R/Conc Cap	Looks good.
301/4	Pourable Joint Seal	Between abutments and approach slabs. Overlaid with asphalt, and cracking along joint.
302/4	Compressn Joint Seal	Evazote foam compression seals above sleeper slabs. Partially tar sealed and asphalt is breaking up at #1 approach. (See 2005, 2011 PHOTOS) Seal at #3 approach is exposed in #2 & #3 lanes, and it is bulging out of joint. (See 2009 Photo)
321/4	R/Conc Approach Slab	Overlaid with asphalt.

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325/4	Slope Prot/Berms	Light horizontal cracks in both slope paves. Pave @ A1 pulled away 0.5 to 1.25 inches. Pave @ A3 pulled away 1.25 to 2 inches. Vertical retaining walls constructed at toe of both slopes. Weeds and grass are growing from some joints.
326/4	Bridge Wingwalls	Diagonal and horizontal cracking in the transverse portion of the wing extensions. Three square foot delam./spall with cracking at Abutment 3 right. (See 2005 Photo) Beginning to spall with delam. and rust at end of #1 Lt. wing.
331/4	Conc Bridge Railing	Concrete Jersey barriers with hairline vertical cracks throughout. Finish is peeling at base of interior faces. Light scale at base of left rail.
340/4	Superstr Cnc Coating	Looks good.
341/4	Substr Conc Coating	Shrinkage cracking in surface at P2.
359/4	Soffit Smart Flag	Hairline trans. cracks with efflorescence in original bays of both spans.

Maintenance Activity Summary

MMS Activity	Description	Recommended	Status	Target Year	Est Cost
364.01	Replace	12/14/2011	1	2013	5000

Repair compression joint seals.

353.04	Br Dk Rpr	10/27/2009	-1	2013	3000
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Patch potholes and areas of raveling in asphalt surface, and approach roadway.

353.08	Br Dk Rpr	12/1/2005	-1	2013	750
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Seal cracks in asphalt surface.

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Maintenance Activity Summary

MMS Activity	Description	Recommended	Status	Target Year	Est Cost
358.06	Substr	12/1/2005	-1	2013	2500

Remove and replace loose concrete at the transverse portion of the #3 right wingwall.

Bridge Notes

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Inspection Notes

Time: 12:15	Temperature: 45 Degrees	Weather: Clear	Team Leader: TAT
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Scope:

☒ NBI: ☒ Element: ☐ Underwater: ☐ Fracture Critical: ☐ Other: Type: Regular NBI

Inspector: RUTHERFORDD

Inspection Team:

Inspection Date: 12/14/2011

Inspector

Inspector